REMARKS

The application has been amended and is believed to be in condition for allowance.

Amendments to the Disclosure

Claims 1 and 2 are amended to recite that electrolyte solution contains aluminum tetrafluoride salt as an anion component, and ammonium, amine, quaternized ammonium, and quaternized amidinium as cationic components used as salt. These amendments find support in the specification and the drawing figures as originally filed (e.g., paragraphs [0017]-[0018]).

Claims 1-3 and 5 are further amended with formal revisions in consideration of U.S. practice and preferences.

The amendments to the claims do not introduce new matter.

Substantive Rejections - Section 103

The Official Action rejected claim 1 under 35 USC 103(a) as being unpatentable over JP 01-268110 ("JP '110") in view of JP 10-116629 ("JP '629") and JP 2000-173876 ("JP '876").

The Official Action rejected claim 2 under 35 USC 103(a) as being unpatentable over JP 2000-173864 ("JP '864") in view of JP '629 and JP '876.

The Official Action rejected claim 3 under 35 USC 103(a) as being unpatentable over JP '864, JP '629 and JP '876, and further in view of Arora et al. (RE 31,743; "ARORA").

The Official Action rejected claim 5 under 35 USC 103(a) as being unpatentable over JP '110, JP '629, and JP '876, and further in view of ARORA.

The rejections are respectfully traversed for at least the reasons that follow.

It is firstly noted that claims 1 and 2 are amended. It is respectfully submitted that none of the cited references teaches or suggests an electrolytic capacitor with an electrolyte solution containing a salt containing aluminum tetrafluoride salt as an anion component, and a salt containing ammonium salt, amine salt, quaternized ammonium salt and quaternized cyclic amidinium ion as cationic components.

As to claim 1, JP '110 discloses an electrolytic capacitor using some electrolyte solution as an electrolytic capacitor. However, JP '110 fails to specify any components of the electrolyte solution. In particular, JP '110 fails to teach the components recited in either of claim 1 or 2.

It is further respectfully submitted that one of skill would not have found it obvious at the time the invention was made to combine the four references as proposed in the Official Action. For example, it would not have been obvious to modify the primary reference JP '110 with the electrolyte of JP '629 and the aluminum electrolytic capacitor of '864.

The present application describes a problem when using aluminum tetrafluoride salt as a solute of an electrolyte

solution, wherein contained water increases a reactivity of the electrolyte solution and an electrode foil, shortening the life of the device (see, e.g., specification at paragraphs [0007]-[0008], [0020]-[0021]). This problem is solved in the invention by including a heat resistant synthetic resin whereby water generation in a separator is controlled.

JP '110 fails to teach or suggest the relation between aluminum tetrafluoride salt and water generation in a separator.

JP '876 discloses an electrolytic capacitor using a separator made of mixed electrolytic paper containing pulp fiber such as manila paper and craft paper with glass fiber. However, JP '876 only discloses that an electrolytic capacitor using tetramethyl-imidazoliumhydrogenphthalate as a solute of an electrolyte solution.

JP '876 fails to teach or suggest, as with JP '110, any relation between aluminum tetrafluoride salt and water generation in a separator. Hence, one of skill would have had no motivation to modify JP '110 with JP '876 as proposed in the Official Action.

Moreover, the proposed combination of references would fail to yield a device as recited in claim 1.

JP '629 discloses a nonaqueous electrolyte solution, aluminum tetrafluoride salt and lithium salt (paragraph [0020]).

In contrast, amended claim 1 requires a salt containing aluminum tetrafluoride salt as an anion component, and a salt

containing ammonium salt, amine salt, quaternized ammonium salt and quaternized amidinium ion as cationic components.

Hence, the electrolyte solution disclosed in amended claim 1 differs from the electrolyte solution disclosed in JP '629.

Furthermore, the proposed combination JP '110, JP '876 and JP '629 would form an electrolytic capacitor having a separator made of rayon or a separator made of a paper mixing pulp fiber and glass fiber, and an electrolyte solution containing an aluminum tetrafluoride salt and lithium salt as a solute.

There is no teaching or suggestion of a salt containing aluminum tetrafluoride salt as an anion component, and a salt containing ammonium salt, amine salt, quaternized ammonium salt and quaternized cyclic amidinium ion as a cationic component. Nor is there any suggestion to lead one of skill to consider a relation between aluminum tetrafluoride salt and water generation in a separator thereby suggesting to one of skill to consider a separator as recited by claim 1.

As to claim 2, it is respectfully submitted that none of the cited references teaches a separator impregnated with an electrolyte solution containing aluminum tetrafluoride salt as an anion component, and ammonium, amine, quaternized ammonium, and quaternized amidinium as cationic components used as salt, as required by claim 2 as amended.

At best, JP ‘629 discloses a nonaqueous electrolyte solution, aluminum tetrafluoride salt and lithium salt (paragraph [0020]).

In contrast, amended claim 2 requires a salt containing aluminum tetrafluoride salt as an anion component, and a salt containing ammonium salt, amine salt, quaternized ammonium salt and quaternized amidinium ion as cationic components.

Hence, the electrolyte solution disclosed in amended claim 2 differs from the electrolyte solution disclosed in JP ‘629, and furthermore, even if one of skill would have combined the references as proposed by the Official Action, the combination would have failed to yield the invention as recited in amended claim 2 (see, e.g., arguments presented as to claim 1).

Therefore, based at least on the reasons set forth above, it is respectfully submitted that claims 1 and 2, as amended, are patentable over JP ‘110, JP ‘629, JP ‘876, JP ‘864, and ARORA.

It is also respectfully submitted that claims depending from claims 1 and 2 are patentable over JP ‘110, JP ‘629, JP ‘876, JP ‘864, and ARORA at least for depending from a patentable parent claim.

Withdrawal of the rejections under Section 103 are therefore respectfully solicited.

Substantive Rejections - Non-statutory Double Patenting

The Official Action rejected claim 1 on the ground of non-statutory double patenting over claim 20 of Takeda et al. (US 7,072,173; "TAKEDA '173") in view of JP '876 and JP '110.

The Official Action rejected claim 2 on the ground of non-statutory double patenting over claim 20 of TAKEDA '173 in view of JP '864 and JP '876.

The Official Action rejected claim 3 on the ground of non-statutory double patenting over claim 20 of TAKEDA '173 in view of JP '864, JP '876, and ARORA.

The Official Action rejected claim 5 on the ground of non-statutory double patenting over claim 20 of TAKEDA '173 in view of JP '876, JP '110, and ARORA.

In response, it is respectfully submitted that independent claims 1 and 2 distinguish over the cited references, including TAKEDA '173, for at least the same reasons set forth above as to the rejections under Section 103, and further because TAKEDA '173 fails to recite, in any claim, a salt containing aluminum tetrafluoride salt as an anion component, and a salt containing ammonium salt, amine salt, quaternized ammonium salt and quaternized amidinium ion as cationic components.

It is further respectfully submitted that TAKEDA '173 fails to recite in any claim a separator as recited in either of amended claim 1 or 2, nor are the recited separators taught or suggested in the description of TAKEDA '173.

Withdrawal of the rejection under non-statutory double patenting is therefore respectfully requested.

From the foregoing, it will be apparent that Applicants have fully responded to the May 28, 2009 Official Action and that the claims as presented are patentable. In view of this, Applicants respectfully request reconsideration of the claims, as presented, and their early passage to issue.

In order to expedite the prosecution of this case, the Examiner is invited to telephone the attorney for Applicants at the number provided below if the Examiner is of the opinion that further discussion of this case would be helpful in advancing prosecution.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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